



Society of Toxicologic Pathology

www.toxpath.org—Hotel Reservation | Meeting Registration & Information | Abstract Submission

27th Annual Symposium

San Francisco

June 22–26, 2008

Hyatt Regency San Francisco

Systems Pathology

**Evaluating Complex Pathological Systems
from Molecule to Morphology**



Systems Pathology: Evaluating Complex Pathological Systems from Molecule to Morphology

**Symposium Chair: Eugenia Floyd, DVM, DACVP,
Pfizer, Inc., Groton, CT**

"Systems Pathology" is the theme of the 27th Symposium, which is divided into six half-day sessions. Traditionally, the toxicologic pathologist synthesizes data (clinical pathology, gross and microscopic pathology) to draw conclusions about the pathobiological course and consequences of toxicity at the organ level. However, technologies that generate high-content biological data such as transcriptomics, metabolomics and molecular imaging, now offer pathologists new endpoints that can lead to deeper understanding of the mechanisms of toxicity at multiple systems levels, from molecule to whole-animal. In generating and analyzing the complex data sets from these technologies, the systems pathologist works collaboratively with specialty scientists, including technology platform specialists and bioinformaticians.

The 2008 symposium will be devoted to Systems Pathology, updating attendees on the pathobiology of whole-animal responses, such as stress, to toxicity and illustrating how knowledge of these responses is important in the practice of toxicologic pathology. Speakers will discuss examples of the integration of high-content data with traditional pathology endpoints, the use of *in vitro* and *in silico* models for systems biology studies that successfully elucidated mechanisms of toxicity, and methods for evaluating animal responses to chemical and drug mixtures. The continuing education courses, which complement the symposium theme, include an update on phospholipidosis, a multisystemic reaction, as well as introductions to bioinformatics and toxicogenomics, two topics important to Systems Pathology.

Please join us in San Francisco for a stimulating program on the future of toxicologic pathology.



San Francisco at night

Continuing Education

NTP Symposium—Saturday, June 21

Pathology Potpourri

Free Event; Registration Required

This interactive symposium on interpreting pathology slides is sponsored by NTP and has become a popular pre-meeting event for attendees. While it is free, registration is required due to space limitations. Please select voting or non-voting participation when you register. For more details, see course description in the Agenda (page 8).

Continuing Education Courses— Sunday, June 22

**Continuing Education Course Chair: Kathleen Funk,
DVM, PhD, DACVP, EPL, Inc., Sterling, VA**

Additional fees

Two half day and one full day **Continuing Education Courses** will be offered this year on Sunday, June 22.

CE 1—Sunday AM

Drug-Induced Phospholipidosis

CE 2—Sunday PM

**The Application of Novel Bioinformatics Approaches to Data
Interpretation in Toxicology and Pathology**

CE 3—All Day Sunday

Toxicogenomics for Pathologists

(limited to 28 people)

Career Development Course

*Free to Symposium Registrants; Registration Required
(limited to 100 participants)*

Effective Communication for the Toxicologic Pathologist

8:00 AM–12:00 NOON

**Co-Chairs: A. Eric Schultze, DVM, PhD, DACVP, Eli Lilly
and Company, Greenfield, IN and Brian R. Berridge,
DVM, PhD, DACVP, GlaxoSmithKline, Research Triangle
Park, NC**

Communicating effectively with colleagues and customers outside our discipline is an important aspect of applying our expertise as toxicologic pathologists. Appropriate and intelligible communication of our data—be it oral or written—largely determines our influence within our respective organizations and also to the scientific community and the public at large. This symposium will identify key target audiences and identify skillful ways to communicate our message.

General Information

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Continuing Education Credits

AAVSB RACE Provider #56

STP is an approved provider for AAVSB RACE continuing education credits as in past years. The continuing education courses during the Annual Meeting are expected to meet delivery in continuing education credit in the medical/surgical category in jurisdictions that recognize AAVSB RACE approval. Four credits will be given for CE1 and CE2, and eight credits for CE 3. Participants should be aware that some boards have limitations on the number of hours accepted in certain categories and/or restriction on certain methods of delivery. Twenty hours of classroom delivery credit is expected to be given for attendance at the scientific sessions. Certificates of attendance will be provided at the conclusion of each course and on Thursday for the scientific sessions.

Exhibit Space Available

The Exhibitor Showcase at the 2008 STP Annual Meeting offers an unmatched opportunity for vendors to reach a targeted audience. More than 500 scientists and industry professionals come together to exchange ideas and present groundbreaking research findings in toxicologic pathology. The limited number of available booths guarantees that exhibitors will not get lost in a crowd of competitors.

To enhance the impact of the exhibits, the scientific poster sessions will be held in the exhibit hall, along with the welcome reception and refreshment breaks. There will also be an internet café in the exhibit hall where attendees can check e-mail during exhibit hours.



Mission Dolores

The Society values the support of exhibitors and believes the relationship between exhibiting companies and the STP membership is a mutually beneficial one. STP provides a wide array of benefits and services to exhibiting companies including two complimentary full conference registrations, company listing and exhibit location published in the Society's Annual Meeting Program, four complimentary category listings, highly visible signage acknowledging all exhibitors, and more!

Please visit www.toxpath.org and click on "Annual Symposium" to view the online Exhibitor Prospectus.

Questions? Please contact STP Exhibits Manager, Liz Kasabian, at (703) 438-7508 or lkasabian@toxpath.org.

Internet Café in the City by the Bay

Be sure to take advantage of the computers in STP's exhibit hall! The Internet Café will be available during exhibit hall hours so you can check e-mail.

Social Events

Welcome Reception

The Welcome Reception will be held on Sunday evening, June 22. Admission to the Welcome Reception is included in the member, non-member, student, exhibitor and spouse/guest registrations. Come and enjoy a relaxing evening mingling with friends and colleagues. Drink tickets will be provided to all registered attendees at the registration desk on site with your meeting materials. Light snacks will also be available.

Student Gathering

Attention Students: The Society invites you to a special student outing on Tuesday afternoon June 24. This will be a fun opportunity to meet fellow students, and interact with scientists representing all facets of the Society as you discuss your future and the various career paths available to you. This function has been the highlight of past meetings for many students. Come and take advantage of the unique networking opportunity.

Details will be e-mailed to student registrants.

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President's Reception

The President's Gala Reception will be held on Wednesday evening, June 25. One ticket to this event is provided to Member, Non-member, exhibitor, and Student Registrants as well as registered Spouse/Guests. Additional tickets can be purchased on site for \$75. Drink tickets will be provided to all registered attendees at the registration desk on site with your meeting materials.

Registration Desk Hours

Atrium I (Main Lobby Level)

Friday, June 20.....4:00 PM–6:00 PM

Grand Foyer (Street Level)

Saturday, June 218:00 AM–11:00 AM, 3:00 PM–6:00 PM

Sunday, June 227:00 AM–6:00 PM

Monday, June 23.....7:00 AM–5:30 PM

Tuesday, June 24.....7:30 AM–12:30 PM

Wednesday, June 25.....7:30 AM–5:30 PM

Thursday, June 267:30 AM–12:00 NOON

Meeting Materials

Printed Program books will be available at the registration desk for all meeting attendees. CE1 and CE2 Course Syllabi and CD ROMS will also be at the registration desk for attendees who are registered for continuing education courses. Badges and event tickets will be mailed in advance of the meeting to attendees from the U.S. and Canada. Attendees from countries outside the U.S. or Canada may pick up their badges at registration. Persons who register for the meeting after May 10 will also need to pick up their badges at the meeting.

Meeting Events

Town Hall Meeting

Members of the Scientific and Regulatory Policy Committee will lead a discussion at 5:30 PM Monday, June 23 on the "Use of Historical Control Data in Carcinogenicity Studies."

Awards Ceremony

The Awards Ceremony will take place on Wednesday evening, June 25. Student travel winners and other STP Award recipients will be recognized at this time.

Annual Business Meeting

The Annual Business Meeting will be held on Wednesday, June 25 immediately following the Awards Ceremony.

Hotel Information

Make Early Reservations at the Headquarters Hotel. Up-to-date overflow hotel information will be available on the Web site.

The **Hyatt Regency San Francisco**, which is directly across the street from the Embarcadero waterfront and the historic Ferry Building in the Financial District, will be the headquarters for the meeting.

The Hyatt is adjacent to the Embarcadero Center, with numerous convenient shops and lunch options, and it is located within five to ten minutes via easy public transportation to popular sites such as Union Square, Chinatown, North Beach, Ghirardelli Square, and Fisherman's Wharf. Municipal transportation—subway, trolley, cable car, and BART light rail lines can all be accessed in front of the Hyatt.

Hyatt Regency San Francisco

5 Embarcadero Center
San Francisco, CA 94111

Phone: (415) 788-1234

Fax: (415) 398-2567



San Francisco Hyatt Regency at Embarcadero Center

General Information

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Hotel Reservations

STP has reserved a limited block of discounted rooms at the Hyatt Regency San Francisco. The Hotel offers guest rooms with either city or bay views. Please help STP by booking your guest room inside the designated block. You can make reservations on-line at: <https://resweb.passkey.com/go/STPA> or by phone at the numbers listed below; please remember to refer to the Society of Toxicologic Pathology Meeting in order to receive the discounted conference rate. All cancellations and changes should be made directly with the hotel. **It is important to make reservations as soon as possible to assure availability.**

Hyatt Regency San Francisco Rates: The daily total is \$238.39 per room. (The rate is \$209 for single and double occupancy, plus 14% tax, and the California Tourism Fee of \$.13 per night).

Toll-free Phone: (800) 233-1234—Please be sure to identify that you are with STP in order to receive the discounted conference rate.

On-line reservations:
<https://resweb.passkey.com/go/STPA>

Local Phone: (415) 788-1234

PLEASE VISIT THE STP WEB SITE

For up-to-date hotel information at

<http://www.toxpath.org/am2008/hotel.asp>.

About San Francisco

San Francisco, with its stunning views of the bay, famous fog, and hilly streets, will provide an exceptional backdrop for the STP 2008 Annual Meeting. Its charming trolleys comprise the world's only surviving cable car system and offer one way to experience the unique character of the city and its distinctive neighborhoods. Inexpensive cafes can be found in every neighborhood and San Francisco's restaurants are regularly rated the best in the world.

San Francisco Activities

Tuesday afternoon will again be a free half day for meeting attendees to explore the local area. Please check with the hotel's concierge on site for information about site-seeing opportunities or visit some of the Web sites suggested below.

Trolleys

San Francisco's charming trolleys comprise the world's only surviving cable car system and offer a way to experience the unique character of the city and its distinctive neighborhoods. The Cable Car Museum at Nob Hill, displays the history and workings of the trolleys and the huge wheels that move the entire cable car system, and is free to visitors.

Golden Gate Park

Golden Gate Park is one of the world's largest man-made havens. It covers over 1,000 acres of San Francisco's downtown and ranges more than 50 city blocks. The Golden Gate Park is home to the tranquil Japanese Tea Gardens, and the oldest glass and wood Victorian greenhouse in the western hemisphere. Please visit: <http://www.golden-gate-park.com> for more information

Alcatraz Cruise/Tour

Visit one of the world's most legendary prisons. Visit their Web site for more information and to purchase tickets:
<http://www.alcatrazcruises.com>.

San Francisco Zoo

The San Francisco Zoo houses 250 species as well as a children's zoo, a miniature train and carousel. Please visit:
http://www.sfzoo.org/openrosters/view_homepage.asp?orgkey=1859 for more information.

Wine Country

The Napa and Sonoma Valleys, 50–60 miles north of the city, produce 7% of the world's wine and are popular destinations for wine lovers.

<http://www.napavalley.com>

<http://www.sonomavalley.com>

Fisherman's Wharf

Fisherman's Wharf is known for its historic waterfront, delicious seafood, spectacular sights and unique shopping, Fisherman's Wharf offers a wide array of things to do for everyone. Fisherman's Wharf offers some of the most incredible views of the San Francisco Bay, the Golden Gate Bridge and the cityscape.

Fisherman's Wharf Aquarium

See, touch, discover, and learn about the fascinating marine life of the San Francisco Bay and its surrounding waters. Walk through tunnels of water filled with over 20,000 aquatic animals. Touch sharks, rays and sea stars. Discover the Bay's ecosystems and the importance of preserving this wonderful natural resource.

General Information Systems Pathology

27th Annual
Symposium

Travel Information

Non U.S. Citizens

Please visit <http://travel.state.gov> for current information about requesting documentation for travel to the U.S. Citizens of some countries will require a visa. Citizens of the 27 Visa Waiver Program countries may only require a machine-readable passport (if certain requirements listed on the above Web site are met).

A Special Note for the Physically Challenged

STP wishes to ensure that no individual with a disability is excluded, denied services, segregated or otherwise treated differently than other individuals because of the absence of auxiliary aids and services. If you need any auxiliary aids or services identified in the Americans with Disabilities Act, or any assistance in registering for this meeting, please contact STP Headquarters, (703) 438-7508, ext. 1443.

Temperature/Attire

The average summer temperature in San Francisco is 66° F (18° C). Casual, comfortable attire is appropriate. A sweater or light jacket may also be needed for the air-conditioned meeting rooms.

Taxes and Tipping

California has a statewide sales tax rate of 7.25%. A 15–20% tip is customary in restaurants if not already included in the bill.

Time Zone

San Francisco is on Pacific Daylight Time in the summer; the time is three hours earlier than Eastern Daylight Time.

Web Sites about San Francisco

<http://www.onlyinsanfrancisco.com>



Fisherman's Wharf is a short ride on the F-Line from the Hyatt Regency along the Embarcadero



Lombard Street

Transportation

Airports

The **San Francisco International Airport** (SFO) is located 12 miles from the Hyatt Regency San Francisco. Most U.S. and many international airlines offer direct flights to San Francisco. San Francisco International Airport is one of the USA's busiest airports, handling both domestic flights and international connections for the Pacific Rim, Europe, and Latin America.

The **Oakland International Airport** (OAK) is San Francisco's other airport, which is located 19 miles from the Hyatt Regency.

Transportation from the Airport

Car Rental

San Francisco International Airport is served by eight major car rental firms. The airport's rental car center allows travelers to pick up and drop off rental cars at one convenient, central location. Alamo, Avis, Budget, Dollar, Enterprise, Hertz, National, and Thrifty car rental counters are located on the 4th floor of the SFO rental car center.

Shuttle or Taxi

The Hyatt Regency San Francisco does not offer its own hotel shuttle to and from the airport. However, shuttle services are available through Yellow Shuttle, Super Shuttle, and Lorries Shuttle. A one-way shuttle to the Hyatt Regency San Francisco is \$13–\$15. No advance reservations are needed or accepted. Simply go to the second level of the airport (by departing flights) to pick up any of the shuttles listed above.

A one-way taxi service from the airport to the Hyatt Regency San Francisco is \$35–45.

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BART (Bay Area Rapid Transit)

BART is another way to get to San Francisco from either airport. BART fares are only \$5.15 from SFO and \$6.35 from OAK (including AirBART) and it only takes a half hour to get downtown. For more BART information go to www.bart.gov. The BART stop for the Hyatt is, Embarcadero.

From San Francisco International Airport—BART is located in the SFO International Terminal and is a short walk to International flight check-in counters, gates and customs. Domestic passengers can walk to BART in 5–10 minutes from Terminals 3 and 1. Terminal 3 is at the opposite end of the walkway from the BART station entrance. Terminal 1 is located on the opposite side of the International Terminal through an adjacent walkway. Passengers can also ride the Airtrain. Airtrain is above the BART station and takes passengers to and from Terminals 3 and 1 in minutes.

From Oakland International Airport—Taking BART from OAK to San Francisco is easy too. The AirBART fare is \$3. You'll need exact change to deposit when boarding the bus. The AirBART bus goes from the terminal to the Coliseum station. The fare to San Francisco is \$3.35 one-way or \$6.70 round trip. Tickets can be purchased inside the station. Then, insert your ticket in the fare gate, go up to the platform and take a San Francisco train for your half hour ride to downtown San Francisco.

BART Hours of Operation:

Weekdays: 4:00 AM to 11:45 PM

Saturdays: 6:00 AM to 11:45 PM

Sundays: 8:00 AM to 11:45 PM

Local Transportation

“How do we use Muni (cable cars, buses, metro)?”

The Citywide public transportation agency is the San Francisco Municipal Railway, better known as Muni. It operates the world-famous cable cars, buses, trolley buses, a metro system, and historic streetcars (trams).

Cable Cars:

There are three cable car routes in San Francisco. Two of these routes, the Powell-Hyde and the Powell-Mason, begin at the corner of Powell and Market Streets, upstairs from the Visitor Information Center, and run north-south to and from Nob Hill and Fisherman's Wharf. At Fisherman's Wharf, you can board the Powell-Hyde line at Hyde and Beach Streets and the



A historic street car on San Francisco's F-Line



Muni is the transportation agency (www.sfmta.com) that operates San Francisco cable cars, street cars, buses and metro.

Powell-Mason line at Bay and Taylor Streets. The third line is the California line running east-west on California Street between Market Street and Van Ness Avenue, serving the Financial District, Chinatown and Nob Hill. This line tends to be the least crowded. The transfer point for all three lines is at Powell and California Streets. Cable cars can be boarded at any designated stop along the route. However, during the busy summer months, it is a good idea to join the queue at the terminus, as the cable cars usually fill up at the beginning of the line. Please be aware that you may experience a 45- to 60-minute wait during the summer.

Buses/Trolley Buses:

Muni's buses and trolley buses run all over the city in frequent intervals (usually every five to 20 minutes). Each route has a number and a name, i.e. 5-Fulton, 24-Divisadero, 42-Downtown Loop, which are prominently displayed on the front and side of the bus, along with the route's destination. Some routes, such as 38L-Geary Limited or 14L-Mission Limited, make only limited stops along their routes. Others, such as 9X-San Bruno Express or 31AX-Balboa "A" Express, operate nonstop from downtown to the outer regions of The City. For more clarity on Muni service, we recommend purchasing a Muni map for \$3.26 (includes tax) at the San Francisco Convention & Visitors Bureau's Visitor information Center or at various stores throughout The City.

Historic Streetcars (Trams):

You can travel back in time on our distinctive worldwide collection of historic streetcars which have been gracing The City with regular service since 1995. Each car is painted in its original livery, be it from Boston, Chicago or Milan. You can find these beautiful streetcars running along the center of Market Street between the Castro District and Fisherman's Wharf. They are collectively known as line F-Market.

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Metro:

Beginning downtown at Embarcadero Station, the Muni Metro's five underground streetcar lines (J-Church, K-Ingleside, L-Taraval, M-Ocean View and N-Judah) take you under Market Street to various points of interest in the western and southwestern regions of The City. The J and N lines branch off after Van Ness station and operate on the surface, and the K, L and M continue underground to West Portal Station before splitting into their own separate surface lines. In the subway section of the system, J and N cars are often coupled together, as are K, L and M cars.

Single Fares: Cable Car \$5, under age 5 free. Bus, Streetcar, Metro \$1.50, 50 cents under age 17, under age 5 free. Muni Fast Passes, which provide unlimited rides, can be purchased here.

Please have the exact fare ready when you board; Metro faregates do not accept any dollar bills.

Transfers:

A two-part transfer slip is provided when you pay your fare on buses, streetcars and Metro lines. This transfer allows you to transfer two more times to any bus, streetcar or Metro line within a 90-minute timeframe. No transfers are given or accepted on cable cars; single fares must be paid each time you board.

The cable car stop outside the hotel is the California Street Line.

The streetcar stop is located directly across from the cable car stop.

The subway/metro stop outside the hotel is the Embarcadero stop and it is located right by the cable car stop.

Busses are also in this same area.

The streetcar, cable car, and trolley buses are all \$5 per ride and the metro is \$1.50 per ride and exact change is needed.



"Painted Ladies" of San Francisco

Agenda

Systems Pathology

27th Annual
Symposium

Saturday, June 21

NTP Satellite Meeting

9:00 AM–5:00 PM

Free Session; Registration Required

Pathology Potpourri: Voting Participants
(limited to 100 people)

Pathology Potpourri: Non-Voting Participants

*Susan Elmore, MS, DVM, DACVP, NIEHS,
Research Triangle Park, NC*

The object of this interactive symposium is to provide continuing education on interpreting pathology slides, to generate lively and productive conversation, and to have a good time. During each talk, the speakers will project a series of images of lesions on one screen with a choice of diagnoses/answers on a separate screen. The members of the audience with wireless keypads will then vote and the voting results will be displayed on the screen. After each voting session, time is allowed for discussion. This is a free session for meeting attendees, but due to space limitations, registration is required.

Some of the images to be discussed in this session will be scanned at high resolution and made available for viewing on the Internet (via a link on the STP Web site) prior to the symposium. An e-mail will be sent to symposium registrants once the slides have been posted.



Palace of Fine Arts

Sunday, June 22

Career Development Course

*Free to Symposium Registrants; Registration Required
(limited to 100 participants)*

**Effective Communication for the Toxicologic
Pathologist**

8:00 AM–12:00 NOON

*Co-Chairs: A. Eric Schultze, DVM, PhD, DACVP, Eli Lilly
and Company, Greenfield, IN and Brian R. Berridge,
DVM, PhD, DACVP, GlaxoSmithKline, Research Triangle
Park, NC*

Communicating effectively with colleagues and customers outside our discipline is an important aspect of applying our expertise as toxicologic pathologists. Appropriate and intelligible communication of our data—be it oral or written—largely determines our influence within our respective organizations and also to the scientific community and the public at large. This symposium will identify key target audiences and identify skillful ways to communicate our message.

CE Courses

*Continuing Education Course Chair: Kathleen Funk, DVM, PhD,
DACVP, EPL, Inc., Sterling, VA*

CE 1

Drug-Induced Phospholipidosis

8:00 AM–12:05 PM

*Chairs: Linda A. Chatman, DVM, MS, MBA, DACVP,
Pfizer Inc., Groton, CT, Mark Emory Cartwright, DVM, PhD,
Schering-Plough Research Institute, Lafayette, NJ, and
Diann Weddle, DVM, PhD, Abbott Laboratories, Abbott Park, IL*

Health authorities and the pharmaceutical industry alike recognize that drug-induced phospholipidosis (PL) can present a formidable challenge for drug development. In a recent Letter to the Editor (*Toxicologic Pathology*, 35:325, 2007) STP was encouraged to “stay abreast of the challenges of drug-induced phospholipidosis through continuing education, encouragement of mechanistic research and support of the ongoing efforts by U.S. FDA and the DruSafe.” The CE program on PL shall address the following needs:

- The expressed need for a continuing education on drug-induced PL.
- An opportunity to hear from speakers who are highly regarded as experts on the topic of drug-induced PL.
- Participants will get the latest research on toxicogenomics and biomarkers.
- Plausible risk management strategies and input regarding U.S. FDA’s concerns.

8:00 AM–8:05 AM

Introduction

8:05 AM–8:35 AM

Drug-Induced Phospholipidosis*Roger Ulrich, PhD, Calistoga
Pharmaceuticals, Inc., Seattle, WA*

Since it was first described more than 30 years ago, many studies have contributed to our understanding of mechanisms, cellular impact and any potential relationship of phospholipidosis to toxicity. Safety concerns arise due to histological similarity to serious genetic lysosomal disorders and to latent drug accumulation. However, inherited diseases are mechanistically distinct and there is no conclusive evidence for mortality or morbidity due to drug-induced phospholipidosis. Current research is focused on eliminating this side effect early in drug discovery and on identification of biomarkers that can be used in development.

8:35 AM–9:05 AM

Biomarkers to Monitor Drug-Induced Phospholipidosis*Frank Hsieh, PhD, Nextcea, Inc.,
Lexington, MA*

Drug-induced tissue phospholipidosis (PL) refers to the abnormal accumulation of phospholipid lamellated membranous inclusions (myeloid bodies) in cells. Many cationic amphiphilic drugs, such as azithromycin, amiodarone, and telithromycin, have been reported in animals to induce tissue phospholipidosis. The significance of PL findings for humans is unknown and cannot currently be assessed non-invasively in the clinic. Major focuses in the presentation include identification of biomarkers to predict PL and biomarkers to monitor PL-associated toxic effects on in vivo catabolism. Biomarkers may reveal drug on-target PL and off-target response during drug treatment. Comparative analysis of in vivo metabolic profiles using novel technologies can identify biomarkers related to the effects of drug administration, such as PL. Examples of these applications will be presented.

9:05 AM–9:35 AM

Toxicogenomics: Its Use Regarding Phospholipidosis*Hiroshi Sawada, PhD, Takeda
Pharmaceutical Company, Yodogawa-ku,
Osaka, Japan*

While drug-induced phospholipidosis (PL) was thought to be induced by inhibiting lysosomal phospholipase activity, the mechanism has not been well understood. In order to understand the molecular mechanism, to establish in vitro screening assay using marker genes and to select candidate genes used as potential clinical biomarkers, we performed DNA microarray analysis on human hepatoma HepG2 cells and rat blood. These data suggested that alterations in lysosomal function, lipid metabolism, intracellular transport, cell proliferation, oxidative stress response and immune response were related to PL. This talk will provide the information about the utility of toxicogenomics in pharmaceutical research.

9:35 AM–9:55 AM

Break

9:55 AM–10:25 AM

Risk Management for Phospholipidosis: An Industry Perspective*Craig E. Thomas, PhD, Eli Lilly Research
Laboratories, Greenfield, IN*

For certain drug targets, cationic amphiphilic structures provide optimal in vivo activity. Accordingly, it is not uncommon to encounter phospholipidosis (PL) in pre-clinical safety assessment. While PL itself is not generally considered to be adverse, this viewpoint is not universally accepted and severe PL may be causal or associated with target organ toxicity. This talk will provide an overview of in silico, in vitro and in vivo tools, including genomics and metabolomics, which can be used in a tiered fashion to assess and minimize PL during early safety assessment and clinical candidate selection. A risk management decision tree for PL compiled by various experts in the pharmaceutical industry will also be presented.

10:25 AM–10:55 AM

Status of Phospholipidosis Working Group at U.S. FDA*James Willard, PhD, U.S. FDA,
Silver Spring, MD*

Since 2004, the U.S. FDA has had a working group studying phospholipidosis in the Critical Path Initiative. Progress in structure activity relationships and predictive tools for phospholipidosis will be presented along with toxicogenomic research to identify early biomarkers of phospholipidosis. Data was obtained from published literature, U.S. FDA submissions, and industry.

10:55 AM–11:25 AM

Phospholipidosis: Is It a True Toxicity?*Kenneth Hastings, PhD, U.S. FDA,
Silver Spring, MD*

Phospholipidosis remains a conundrum in drug development. Although many useful methods have been developed to predict the ability of candidate drug compounds to produce this effect, very little useful work has been directed at answering the most important question: is it a true toxicity? Animal models have never provided a definitive answer to this question: even in the case of amiodarone, data are conflicting. There are examples of tissue-specific adverse effects that seem to be associated with phospholipidosis, but mechanistic explanations are lacking. For example, a persistent question is this: does phospholipidosis represent a mechanism of toxicity or one of detoxification? If it is the latter, that would imply an association with toxicity, but not a direct mechanism. Another factor that has yet to be understood at any useful level has been the role of metabolism in producing phospholipidosis where structural analysis of a drug candidate demonstrates no warning signal for potential to produce the effect. Although an approach often taken in drug development is to identify compounds that have the potential to produce phospholipidosis and eliminate these from the "drug pipeline," this might not be a wise approach if in fact the effect is not associated with toxicity and might, in fact, indicate a potentially advantageous property of intracellular trapping.

11:25 AM–12:05 PM

Forum Discussion*Mark Emory Cartwright, DVM, PhD,
Schering-Plough Research Institute,
Lafayette, IN*

12:05 PM–1:30 PM

Lunch Break

CE 2

The Application of Novel Bioinformatics Approaches to Data Interpretation in Toxicology and Pathology

1:30 PM–5:25 PM

*Chair: Bruce D. Car, BVSc, PhD, DACVP, DABT,
Bristol-Myers Squibb Company, Princeton, NJ*

The objective of this course is to familiarize pathologists with the novel bioinformatic approaches now becoming routinely used to analyze data from transcriptional profiling, metabonomic and proteomic data sets, as well as gaining some foothold in the analysis of clinical chemistry and hematologic data. The size of data sets (to 30,000 different analytes) and complexity (multiple time points of multiple analytes over multiple treatment and control groups) and meaningful linkage of large transcriptomic, metabonomic and proteomic datasets to traditional in-life, necropsy, histopathology and clinical pathology endpoints typically transcends a traditionally trained pathologist's facile ability to develop interpretations. When the ability to link systems biology profiling datasets to traditional endpoint analyses depends on multiple individuals across research departments, the focus and impact of such interpretation is frequently lost, however, when embodied within one or few individuals, the heightened depth of pathology data interpretation becomes an invaluable diagnostic in pharmaceuticals development and the understanding of disease. The course will be divided into several chronologically staged components: data storage (warehouses), retrieval and visualization (Spotfire, Excel, scatter plots, dendrograms, heat maps, linkage maps, principal components analysis, other), comparison to reference intervals (historic or recent derived from contemporaneous warehoused data), data compendia or large historic databases (Iconix DrugMatrix, GeneLogics, In-house), application of pathway mapping tools which have curated much historic literature (Ingenuity, CambridgeCellNet, GeneGo, etc), statistics (ANOVA, T tests, T rank, others or none) and interpretation. These components will be treated theoretically in lectures and working examples will be provided in practical sessions.

1:30 PM–1:35 PM

Introduction

1:35 PM–2:25 PM

An Introduction to Bioinformatics: Distilling Meaning from Large Datasets

*Bruce D. Car, BVSc, PhD, DACVP, DABT,
Bristol-Myers Squibb Company,
Princeton, NJ*

Classic approaches to data evaluation; statistics and reference intervals are less applicable to increasingly complex clinical pathology, txg, proteomic, and metabonomic data sets. Reference to large databases, use of data datawarehouses and new data visualization techniques facilitates better evaluation.

2:25 PM–3:15 PM

Guiding Bioinformatics Approaches to Problem Solving with Software, Data Compendia and Common Sense

*William R. Foster, PhD, Bristol-Myers Squibb
Company, Princeton, NJ*

The use of data visualization and clustering tools, commercial software, biochemical pathway tools to facilitate understanding of complex data sets will be discussed. The context and use of

historic reference data in these evaluations is key to providing specificity and removing user bias. Examples will use clinical pathology and toxicogenomic data sets.

3:15 PM–4:05 PM

Solutions to Creating and Asking Questions of Complex Data Sets

*Mette Peters, PhD, Rosetta Biosoftware,
Seattle, WA*

To ask questions of complex data sets, study planning and management, data preparation and quality control, data integration and analysis, and data accumulation and meta-analysis are real bioinformatic challenges. This talk will be a discussion of current and future bioinformatic solutions to these issues.

4:05 PM–4:35 PM

Break

4:35 PM–5:25 PM

The Creation and Use of Predictive Tools in Toxicology

*Constantine Kreatsoulas, PhD, Merck,
West Point, PA*

The analysis of large data sets with reference to large databases infers some predictive value within reference data sets. The creation of predictive tools from historic information as a means to interrogate new test sets is an evolving science in toxicology and drug metabolism and will be discussed in the context of pharmaceuticals toxicology and pathology.

CE 3

Toxicogenomics for Pathologists

(limited to 28 people)

8:00 AM–12:00 NOON

1:30 PM–5:30 PM

*Co-Chairs: Kevin T. Morgan, BVSc, PhD, DACVP,
Sanofi-Aventis, Chapel Hill, NC, and Christopher J. Thompson,
PhD, DABT, Sanofi-Aventis, Bridgewater, NJ*

The advent of microarray technology has provided safety scientists with both the ability to generate massive amounts of data from tissue transcriptomes and the problem of how to make sense of it all. The application of large-scale transcript (mRNA) data to Toxicology is evolving into the new discipline of Toxicogenomics (TGx). Pathologists, due to their broad training in general physiology and mechanisms of disease, have a great deal to contribute to TGx. The goal of this course is to help pathologists become familiar with the principles of TGx, and to learn to incorporate transcriptome data into the formulation of hypotheses on mechanisms of disease. Strategies for interpreting microarray data will be introduced, along with discussions of frequently impacted biochemical and immunological pathways, and common confounders of gene expression interpretation, such as fasting and the circadian rhythm. During a practical session, case studies will be presented such that participants will have the opportunity to apply some of the strategies and skills they acquire to selected TGx data sets.

Sidenote:

This year, two complementary CE courses are being offered covering Toxicogenomics (TGx) and Bioinformatics. The TGx course will be essentially identical to the one presented in 2007, with minor modifications in response to attendees' comments. Skills in Bioinformatics are critical for successful TGx studies, but this complex and interesting field is only addressed briefly in the TGx course. The more in-depth presentation of Bioinformatics, to be provided in the Bioinformatics CE course, will go well beyond the application of these important and interesting techniques to TGx, including the application of computational pattern recognition approaches to pathology data analysis and interpretation. If you have further questions concerning the content of these courses, please do not hesitate to contact Kevin Morgan (TGx) or Bruce Car (Bioinformatics).

5:30 PM–7:00 PM

Welcome Reception
(Beverages and light snacks)

5:30 PM–7:00 PM

Exhibits and Poster Sessions Open

Monday, June 23

Scientific Sessions

Symposium Chair: Eugenia Floyd, DVM, DACVP, Pfizer, Inc., Groton, CT

Monday Morning

7:00 AM–8:00 AM

Continental Breakfast

7:00 AM–11:00 AM

Exhibits and Poster Sessions Open

8:00 AM–8:10 AM

Welcome

STP President: Gary Boorman, DVM, PhD, DACVP, Covance, Vienna, VA

Introduction to Keynote

Eugenia Floyd, DVM, DACVP, Pfizer, Inc., Groton, CT

8:10 AM–9:00 AM

Keynote Address

David J. Galas, PhD, Institute for Systems Biology, Seattle WA and Battelle Memorial Institute, Columbus, OH

Accelerated Innovation in Drug Development and Environmental Protection from Application of Novel Technologies and Systems Biology

Dr. David J. Galas is now heading the life sciences programs at the Battelle Memorial Institute, a non-profit organization that manages several national laboratories including the Oak Ridge, Brookhaven and Pacific Northwest National Labs. He is also a faculty member at the Institute for Systems Biology in Seattle where he carries out his research programs. Dr. Galas is a co-founder of Keck Graduate Institute, and served as KGI's first Chief Academic Officer. He also founded and served in senior management for several biotech companies, including Ionian Technologies, Darwin Molecular and Chiroscience R&D. Dr. Galas was Director for Health and Environment Research in the U.S. Department of Energy, where he managed the

Human Genome Project. Before his service in Washington, Dr. Galas was a professor of molecular biology at the University of Southern California. He received MS and PhD degrees in physics from the University of California, Davis-Livermore and earned his undergraduate degree in physics from the University of California, Berkeley. His research interests include molecular biology, human genetics and the development of new technologies for the life sciences. He is a lifetime National Associate of the National Academy of Science.

Session 1:

Systemic Pathobiological Pathways and Processes

9:00 AM–12:15 PM

Co-Chairs: Dana Walker, DVM, PhD, DACVP, Bristol-Myers Squibb Company, East Syracuse, NY and Hajime Hiraragi, DVM, PhD, DACVP, Genentech, South San Francisco, CA

This session will provide an overview and current understanding of whole-body and multi-organ pathobiological response to perturbations commonly associated with toxicity. The presentations will emphasize systemic effects initiated and exacerbated by the stress response, the acute phase reaction and innate immune responses. Speakers with well-established expertise in these areas will discuss novel and often little-known, but critical to far-reaching effects of each of these responses including their effects on common endpoints of pathology and important differences between humans and common laboratory species. The link between chemically-induced toxicity and these effects and the influence of such effects on specific processes, such as glucose and lipid metabolism, and hepatic-gastrointestinal, cardiovascular and neurologic systems will be addressed.

9:00 AM–9:10 AM

Introduction

Co-Chairs: Dana Walker, DVM, PhD, DACVP, Bristol-Myers Squibb Company, East Syracuse, NY and Hajime Hiraragi, DVM, PhD, DACVP, Genentech, South San Francisco, CA

9:10 AM–9:55 AM

Accelerating the Degenerative Diseases of Aging

Bruce N. Ames, PhD, Children's Hospital Oakland Research Institute, Oakland, CA

9:55 AM–10:15 AM

Break

10:15 AM–10:55 AM

The Role of Hepatic Macrophages in Regulation of Idiosyncratic Drug Reactions

Cynthia Ju, PhD, University of Colorado, Denver, CO

10:55 AM–11:35 AM

Stress, Glucocorticoids and Obesity

Mary F. Dallman, PhD, University of California-San Francisco, San Francisco, CA

11:35 AM–12:15 PM

Regulation of Lipid Metabolism During the Acute Phase Response: Role of Nuclear Hormone Receptors

Carl Grunfeld, MD, PhD, University of California-San Francisco, San Francisco, CA

Agenda

Systems Pathology

27th Annual Symposium

Monday Afternoon

12:15 PM–1:30 PM **Lunch Break**
12:00 NOON–4:30 PM **Exhibits and Poster Sessions Open**

Career Development Lunchtime Series

12:15 PM–1:15 PM

This lunch session will highlight topics that have relevance to all our members at each stage of their career development.

All STP members and students are welcome to this free event, Registration is required. Box lunches will be provided for the first 30 RSVPs.

Session 2: Pathological Interactions of Major Organ Systems and Tissues

1:30 PM–4:50 PM

Co-Chairs: Samuel Cohen, MD, PhD, University of Nebraska Medical Center, Omaha, NE, and Thomas P. Brown, DVM, MS, PhD, DACVP Pfizer Global Research, Mystic, CT

Chemicals often produce toxicity in more than one organ. They can also produce toxicity indirectly in one tissue by directly affecting a different tissue. Such complex processes of toxicity pose significant challenges to toxicologists who seek to devise screening tests (especially *in vitro*) and elucidate mechanistic understanding. In this session, examples will be presented demonstrating these types of complex interactions such as multi-organ vascular effects, interactions of multiple organs involved in the metabolic syndrome, and the converging drug-induced alterations of multiple metabolic pathways (intermediary, lipid, carbohydrate) in liver and adipose tissue that can produce toxicities and tumors in other tissues.

1:30 PM–1:40 PM **Introduction**
Co-Chairs: Samuel Cohen, MD, PhD, University of Nebraska Medical Center, Omaha, NE, and Thomas P. Brown, DVM, MS, PhD, DACVP Pfizer Global Research, Mystic, CT

1:40 PM–2:20 PM **Metabolic Syndrome pathophysiology and clinical presentation**
Yehuda Handelsman, MD, FACP, FACE, Metabolic Institute of America, Tarzana, CA

2:20 PM–3:00 PM **PPAR Agonist-Induced Edema**
Tianxin Yang, MD, PhD, University of Utah, Salt Lake City, UT

3:00 PM–3:30 PM **Break**

3:30 PM–4:10 PM

Virtual Modeling of the Metabolic Syndrome Patient

Scott Siler, PhD, Entelos, Inc., Foster City, CA

4:10 PM–4:50 PM

Serum Lipoprotein Changes Reflecting Altered Hepatic Metabolism Associated with Drug Induced Vascular Injury

Michael Lawton, PhD, Pfizer Global Research, Groton, CT

5:30 PM–6:30 PM

Town Hall Meeting: Use of Historical Control Data in Carcinogenicity Studies

Tuesday, June 24

Tuesday Morning

7:00 AM–8:00 AM

Continental Breakfast

7:30 AM–8:00 AM

Optimum Strategies for Preparing Figures for Publication

Eli Ney, NIEHS and Beth Mahler, NIEHS, Research Triangle Park, NC

9:00 AM–12:15 PM

Exhibits and Poster Sessions Open

Session 3: Whole Animal Responses to Perturbations: Examples

8:00 AM–12:00 Noon

Co-Chairs: Frances Clemo, DVM, PhD, DACVP, Pfizer Inc., Groton, CT and Calvert Loudon, DVM, PhD, DACVP, AstraZeneca, Alderly Park, Cheshire, United Kingdom

This session will provide a comprehensive review of whole animal responses to various types of drug toxicities with an emphasis on the molecular, biochemical and physiological effects. Current issues in toxicology such as systemic inflammatory response syndrome (SIRS), cytokine storms, cyclooxygenase (COX) related cardiovascular-renal toxicity, and aging will be examined. Examples of the risk assessment of these systemic responses in animals will be used to illustrate how translational evaluation of animal findings can improve prediction and understanding of risk for toxicity to humans.

8:00 AM–8:10 AM

Introduction

Co-Chairs: Frances Clemo, DVM, PhD, DACVP, Pfizer Inc., Groton, CT and Calvert Loudon, DVM, PhD, DACVP, AstraZeneca, Alderly Park, Cheshire, United Kingdom

8:10 AM–8:50 AM

Forecasting Cytokine Storms: Everything Old is New

Christopher Horvath, DVM, MS, DACVP, Archemix Corporation, Cambridge, MA

8:50 AM–9:30 AM

Pathophysiology of Cyclooxygenase Inhibition in Animal Models

Zaher Radi, PhD, DVM, MS, DACVP, Pfizer Global R&D, Drug Safety R&D, St. Louis, MO

- 9:30 AM–10:00 AM **Break**
- 10:00 AM–10:40 AM **Opportunities and Challenges for Safety Evaluation for “High Risk” Targets (Small and Large Molecules) in the Post TeGenero Era**
Harsukh Parmar, MD, AstraZeneca, London, United Kingdom
- 10:40 AM–11:20 AM **Cytokines and the AIRS in Pre-Clinical Toxicology studies: Impact on Drug Development**
Bob Scott, MD, Astrazeneca,
- 11:20 AM–12:00 PM **Caloric Restriction and Aging: Studies in Mice and Monkeys**
Richard Weindruch, PhD, FFPM, University of Wisconsin, Madison, WI

Tuesday Afternoon

Free Time

Wednesday, June 25

Wednesday Morning

- 7:00 AM–8:00 AM **Continental Breakfast**
- 7:30 AM–8:00 AM **Optimum Strategies for Preparing Figures for Publication**
Eli Ney, NIEHS and Beth Mahler, NIEHS, Research Triangle Park, NC
- 9:00 AM–1:30 PM **Exhibits and Poster Sessions Open**
- Session 4:**
Integrating Tissue Pathology with Systems Biology Data
8:00 AM–12:00 NOON

Co-Chairs: Yvonne Dragan, PhD, AstraZeneca, Wilmington, DE and Myrtle Davis, DVM, PhD, Eli Lilly Research Laboratories, Greenfield, IN

Histopathologic observation often provides the first physiological evidence of the potential for a disease process or adverse effect in tissues. One of the biggest challenges facing pathologists is selecting the best experimental methods to transform these initial observations into evidence that supports a specific molecular disease pathogenesis or mechanism of toxicity. Additional challenge is recreated by the cellular heterogeneity of responses within a tissue, which requires special consideration both in experimental design and interpretation of results. The main objective of this session is to provide an overview of approaches to understanding molecular pathogenesis by effectively integrating pathological endpoints with the complex, high-content molecular data generated in systems biology investigations. Imaging techniques customized for laboratory animals and tissue microdissection techniques customized for laboratory animals and tissue miscor dissection techniques for tissue profiling are among the technological advances that provide pathologists with

an unprecedented ability to link detailed molecular understanding with the complexity of whole organism responses and anatomical detail. Speakers in this session will provide examples of techniques and approaches that have significantly expanded the pathologist's capabilities and resources for meeting the challenges commonly experienced during investigations that seek to elucidate the mechanisms of pathogenesis.

- 8:00 AM–8:10 AM **Introduction**
Co-Chairs: Yvonne Dragan, PhD, AstraZeneca, Wilmington, DE and Myrtle Davis, DVM, PhD, Eli Lilly Research Laboratories, Greenfield, IN
- 8:10 AM–8:50 AM **Imaging Biomarkers for Safety**
Allan Johnson, PhD, Duke University, Durham, NC
- 8:50 AM–9:30 AM **MALDI MS Tissue Imaging and Profiling**
Richard Caprioli, PhD, Vanderbilt University, Nashville, TN
- 9:30 AM–10:00 AM **Break**
- 10:00 AM–10:40 AM **Systems Pathology Integrating Metabonomic and Proteomic Endpoints**
Robert McBurney, PhD, BG Medicine, Inc., Waltham, MA
- 10:40 AM–11:20 AM **Integrating Gene Expression with Histopathology**
Warren Glaab, PhD, Merck, West Point, PA
- 12:00 NOON–1:30 PM **Lunch Break**

Wednesday Afternoon

Session 5: In Vitro Methods in Systems Biology Research

1:30 PM–5:00 PM

Co-Chairs: Donna Dambach, VMD, PhD, DACVP, Genentech, South San Francisco, CA and Katrina Waters, PhD, Pacific Northwest National Laboratory, Richland, WA

The precept of Systems Biology is the ability to obtain, integrate and analyze complex data from multiple experimental sources using interdisciplinary tools with an overall goal of examining the “gestalt” of a biological process, e.g. disease or toxicity. A fundamental aspect of the application of a systems biology approach is the need to verify the physiological relevance of the data generated. Most often investigative toxicology studies are initiated as the result of a clinical or histological finding. One common approach to these studies is the use of *in vitro* modeling systems to generate the systems biology data, anchoring the data to traditional data endpoints, for which we understand the relevance and can therefore establish a benchmarked relationship, and finally integrating all data with the goal of deriving a more robust, mechanism-based risk assessment. This session will provide examples of the use of *in vitro* and *in silico* modeling systems to investigate toxicity-related issues. In particular, each speaker will provide detailed examples of the

Agenda Systems Pathology

27th Annual Symposium

issues, the rationale for the investigative approach utilized, the process of integration of various technologies, and the integrated, interpretive risk assessment of those data and its impact in risk assessment. These are meant to be practical examples of the approaches that may be taken to provide robust risk assessment through the evaluation of complex data.

1:30 PM–1:40 PM	Introduction <i>Co-Chairs: Donna Dambach, VMD, PhD, DACVP, Genentech, South San Francisco, CA and Katrina Waters, PhD, Pacific Northwest National Laboratory, Richland, WA</i>
1:40 PM–2:20 PM	HIV Drugs and the Metabolic Syndrome <i>Oliver Flint, PhD, Bristol-Myers Squibb Company, Princeton, NJ</i>
2:20 PM–3:00 PM	Metabolomics of Human Embryonic Stem Cells Reveals Candidate Biomarkers and Biochemical Pathways of Developmental Toxicity <i>Gabriela Cezar, DVM, PhD, University of Wisconsin, Madison, WI</i>
3:00 PM–3:20 PM	Student Presentation (TBD)
3:20 PM–3:40 PM	Break
3:40 PM–4:20 PM	Organ Slices Provide Mechanistic Insight into Drug-Induced Organ Injury and Facilitate Comparisons of Animal and Human Tissue <i>Alison Vickers, PhD, Allergan, Inc., Irvine, CA</i>
4:20 PM–5:00 PM	Hepatocyte Systems for Understanding Mechanisms of Drug-Inflammation Interactions that Lead to Liver Injury <i>Patricia E. Ganey, PhD, Michigan State University, East Lansing, MI</i>
5:30 PM–5:50 PM	Awards Ceremony
5:50 PM–6:30 PM	Annual Business Meeting
7:00 PM–9:00 PM	President's Reception

Thursday Morning

Session 6:

Evaluating Animal Responses to Combination Challenges

8:00 AM–11:55 AM

Co-Chairs: Doug C. Wolf, DVM, PhD, FIATP, ATS, U.S. EPA, Research Triangle Park, NC and Prashant Nambiar, DVM, MS, PhD, DACVP, Genzyme Corporation, Framingham, MA

Drugs, personal care products, crop protection products, and environmental chemicals are assessed for safety and risk typically without consideration of potential toxicological interactions. However, systematic methods for toxicity testing of chemical

mixtures are being developed because of social concern about the possible additive or synergistic environmental effects of chemical mixtures and because the biopharmaceutical industry has growing interest in the safety, efficacy, and potential advantages of combination therapy. Toxicity evaluations of chemical mixtures, whether the mixtures are produced by change within the environment or by design for combination therapy share common principles of study design and analysis that may be different from what is required for single chemicals. This session will present fundamentals of study design and data analysis for mixtures using component based and whole mixture approaches. The presentations will discuss current regulatory guidance and relate how concepts for evaluating data on chemical or drug mixtures and interactions are applied in safety assessment.

7:00 AM–8:00 AM	Continental Breakfast
8:00 AM–8:10 AM	Introduction <i>Co-Chairs: Doug C. Wolf, DVM, PhD, FIATP, ATS, U.S. EPA, Research Triangle Park, NC and Prashant Nambiar, DVM, MS, PhD, DACVP, Genzyme Corporation, Framingham, MA</i>
8:10 AM–8:50 AM	Evaluation Methods, Designs, Techniques and Risk Assessment of Mixtures <i>Jane Ellen Simmons, PhD, U.S. EPA, Research Triangle Park, NC</i>
8:50 AM–9:30 AM	Mixtures of "Antiandrogens" Induce Malformations of the Male Rat Reproductive Tract: Additivity or Synergy? <i>Earl Gray, PhD, U.S. EPA, Research Triangle Park, NC</i>
9:30 AM–9:50 AM	Student Presentation (TBD)
9:50 AM–10:20 AM	Break
10:20 AM–10:40 AM	Student Presentation (TBD)
10:40 AM–11:10 AM	Preclinical Support for Combination Therapy in the Treatment of Autoimmunity with Atacicept <i>Rafael Ponce, PhD, ZymoGenetics, Inc., Seattle, WA</i>
11:10 AM–11:40 AM	Combination of Antiangiogenic Therapy with Other Anticancer Therapies <i>Beverly Teicher, PhD, Genzyme Corporation, Framingham, MA</i>
11:40 AM–11:55 AM	Session Ends/Closing Comments

Registration Information

Systems Pathology

27th Annual
Symposium

Symposium Registration Fees

Member and Non-member registration fees include the Symposium proceedings, access to scientific sessions, exhibit hall, daily continental breakfast, morning and afternoon coffee breaks during the scientific sessions, and admission for one to the Welcome Reception and the President's Gala Reception.

Guest/Spouse Registration

The Guest/Spouse registration fee includes continental breakfast (Monday through Thursday) in the STP Guest Hospitality Suite at the Hyatt Regency San Francisco, one admission to the Welcome Reception Sunday night and the President's Gala Reception Wednesday evening. There will be a Monday morning tour (details to be posted on Web site) for Guest/Spouses who register for the meeting by April 1, 2008.

Student Registration

The Student registration fee includes access to all sessions and exhibits, daily continental breakfast, admission for one to the Welcome Reception, Student Reception, and the President's Gala Reception. A letter of verification from a department chairman MUST accompany student registrations. Any student registration received with no verification letter will be processed at the higher NON-MEMBER fee. Copies of student identification cards are NOT acceptable.

Continuing Education Course Registration

A separate registration fee must be paid to attend the Continuing Education course(s). The NTP Satellite Symposium is free, but registration is required.

There is an additional CE Course Fee of \$100 for registrants who are not also registering for the Annual Meeting. Continental breakfast is offered for working CE registrants on Sunday.

Registration Instructions

The on-line registration process is fast and convenient—visit www.toxpath.org or register using the registration form in this brochure. Please note that registration is not considered complete until payment is received.

Please call (703) 438-7508, ext. 1451 if you have any questions. Please DO NOT MAIL REGISTRATION FORMS AFTER May 20, 2008. After May 20th, you will have to register on-line or on-site.

Non-members who apply for membership prior to June 30 and who are accepted will receive complimentary dues for the remainder of 2008 and the journal issues for the remainder of the year. Please visit www.toxpath.org to apply for membership.

Cancellation Policy

If you must cancel your registration, all requests must be received in writing to STP Headquarters no later than May 10, 2008. The registration fee will be refunded less a \$25 processing fee.

Hotel Reservations

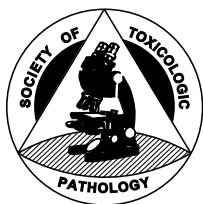
Please see hotel information and rates on pages 4–5. You can make your hotel reservation on-line or by telephone. All cancellations and changes should be made directly with the hotel. You are encouraged to make reservations as soon as possible as the hotel block is expected to be sold out well before the hotel is deadline of May 29.

Meeting Materials

Printed Program books will be available at the registration desk for all meeting attendees. CE1 and CE2 Course Syllabi and CD ROMS will also be at the registration desk for attendees who are also registered for those continuing education courses. Badges and event tickets will be mailed in advance of the meeting to attendees from the U.S. and Canada. Attendees from countries outside the U.S. or Canada may pick up their badges at registration. Persons who register for the meeting after May 10 will also need to pick up their badges at the meeting.



Alamo Square



The Society of Toxicologic Pathology

27th Annual Meeting and Exhibition

June 22–26, 2008

San Francisco Hyatt Regency  San Francisco, California

To Register
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www.toxpath.org

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CONTINUING EDUCATION COURSES SELECTION—Please check box(es) to indicate your selection(s).

- Saturday, June 21** 9:00 AM–4:30 PM NTP Satellite Symposium: *Pathology Potpourri* (free to meeting registrants)
☐ Voting Participation—(limited to 100 registrants) ☐ Non-Voting Participation
Sunday, June 22 8:00 AM–12:05 PM (Course fees are listed in Meeting Registration Section below.)
1:30 PM–5:25 PM ☐ **CE1**—Drug-Induced Phospholipidosis
Full Day Course ☐ **CE2**—The Application of Novel Bioinformatics Approaches to Data Interpretation in Toxicology and Pathology
☐ **CE3**—Toxicogenomics for Pathologists: (limited to 32 registrants)

CAREER DEVELOPMENT SESSIONS—Free to meeting registrants

- ☐ **Sunday, June 22** 8:00 AM–12:00 NOON—Effective Communication for the Toxicologic Pathologist
☐ **Monday, June 23** 12:15 PM–1:15 PM—Career Development Lunchtime Series

REGISTRATION—Please add fees for Meeting, Continuing Education Courses below.

Meeting Fees: Please check applicable box(es).	Until April 10 th	Until May 20 th	On-site
<input type="checkbox"/> STP Member	\$500	\$550	\$585
<input type="checkbox"/> Student	\$115	\$135	\$170
<input type="checkbox"/> Non-Member, Government/Academic	\$585	\$650	\$685
<input type="checkbox"/> Non-Member, Industry	\$700	\$750	\$785
<input type="checkbox"/> Guest (name) _____	\$160	\$180	\$220
Continuing Education Course Fees: For CE Course registration only, add \$100 to Course fee.			
<input type="checkbox"/> CE 1 or <input type="checkbox"/> CE 2 (per half day course)	\$150	\$175	\$200
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Registration Total (including Meeting, Guest, CE Courses):	\$ _____	\$ _____	\$ _____

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REGISTER ON-LINE: www.toxpath.org

All hard copy and fax registration information will be entered on-line by STP staff.

CANCELLATION/REFUND POLICY: All requests for cancellations and/or refunds must be received in writing at STP HQ by **May 10, 2008**. These refunds will be processed, less a \$25 processing fee. Refund requests received after May 10, 2008, will not be processed.

STP provides a printed Annual Meeting registrant list to all meeting attendees on-site.

STP also offers Annual Meeting exhibitor companies or corporate sponsors the opportunity to purchase a pre- or post-meeting registrant list (physical address, not e-mail address) for approved one-time mailings about Annual Meeting events or their products or services.

☐ Check here if you wish to be excluded from the list provided for approved 2008 Exhibitor or Sponsor mailings.

STP Sponsorship Opportunities



Have you considered becoming a Society sponsor? This is an excellent way to increase your company's presence before, during, and after the STP Annual Meeting while supporting the activities of the Society. Sponsors are recognized on the STP Web site, in the preliminary and final *Programs*, in *Scope* Newsletters and on signage throughout the meeting.

Sponsorship Opportunities:

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All sponsors receive the following:

- Acknowledgment on STP Web site
- Acknowledgment on the Wall-of-Honor during Annual Symposium events
- Printed recognition in the STP Annual Symposium final *Program* (deadline is March 15, 2008)
- Printed acknowledgement in the Spring (deadline is March 15, 2008) and Summer Editions of *Scope*, the STP Newsletter
- Acknowledgement in the STP Annual Symposium Preliminary *Program*
- Sponsor ribbons for name badges

For more information please contact Sue Pitsch at (703) 438-7508 or spitsch@toxpath.org.

Sponsored Events (as of March 12, 2008)

EPL Reception

Monday, June 23, 2008

6:00 PM–10:00 PM • Atrium 3–5

Charles River Reception

Saturday, June 21, 2008

7:00 PM–10:00 PM • Bayview Room

Exhibitor-Hosted Education Session

"Image Analysis in a GLP Environment" Sponsored by Aperio

Wednesday, June 25, 2008

10:00 AM–11:30 AM • Bayview Room

Exhibitor-Hosted Events—New this Year!

Exhibitors or Sponsors may host an event for all attendees, such as a breakfast, lunch, or reception that does not compete with STP scheduled events. The cost of hosting a function is free; however, all catering costs are the responsibility of the exhibiting company. Events will be publicized in the Exhibits section of the *Program* book. Please contact Liz Kasabian, Exhibits Manager at lkasabian@toxpath.org for further information.



STP ADVERTISING OPPORTUNITIES

Place an advertisement in the 2008 STP final Annual Meeting *Program* and get your second ad placed in the *Toxicologic Pathology Journal* for FREE! This two for one bargain cost \$1,000. Ads displayed in the 2008

Program will also be published in the Issue I of the 2009 *Toxicologic Pathology Journal*...a savings of \$800. Create a lasting impression with your advertisement in the 2008 Annual Meeting *Program*; your company name will be available as a source of information both during and after the show. You will be receiving maximum exposure to this niche market via the Annual Meeting attendees and the additional readership of the *Journal*. 43% of the membership work in management and are decision makers for their organizations. 100% of the Annual Meeting Attendees receive the *Program*, and 1,000 researchers and research associates receive the *Toxicologic Pathology Journal*.

For More Information,
please call Liz Kasabian at (703) 438-7508 ext. 1454
or send an e-mail to lkasabian@toxpath.org.

2008 EXHIBITORS

(as of March 12, 2008)

Abaxis	Histotox Labs, Inc.
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STP Headquarters: 1821 Michael Faraday Drive, Suite 300, Reston, VA 20190
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Call for Abstracts

STP is pleased to invite pathologists, residents, and students to submit abstracts for poster presentation at the 2008 STP Annual Meeting. Abstracts may be submitted on-line at www.toxpath.org through April 15, 2008. Contents of the poster presentations should pertain in some way to the field of toxicologic pathology but are not limited to "classic" toxicity studies/issues/technologies. Naturally occurring toxicities (including poisonous plants), in any species as well as spontaneous and infectious diseases of species used in toxicity studies are welcome as are mechanistic *in vitro* and molecularly-oriented studies. Studies in alternative species such as fish are also encouraged.

Papers previously published may be submitted and presented, however, only original unpublished work will be published in *Toxicologic Pathology*.

Student Travel Awards

Purpose

Student Travel Awards are available to Graduate Students for participation in the Annual Symposium of the Society of Toxicologic Pathology. Each of the ten students who are chosen will receive a \$1000 stipend to defray travel, and lodging costs associated with attending the convention, complimentary meeting registration, and complimentary student membership (for the following year). Recipients will be honored at an Awards Ceremony prior to the Annual Business Meeting on Wednesday. All recipients will be required to present a poster at the Symposium and several of the trainees will be asked to give an additional short oral presentation concurrent with scientific sessions.

Eligibility

To be eligible to compete for this award, trainees must be graduate students working in the field of experimental or toxicologic pathology or a related discipline (to include veterinary students, pathology residents, veterinary or medical, and/or MS or PhD students), and must be available to travel to San Francisco, CA to attend the meeting. Candidates who have recently completed (within 12 months of the application date) their graduate studies will also be eligible.

How to Apply

Return Student Travel applications (Items 1–4 below) by April 1, 2008 to:

STP Headquarters
1821 Michael Faraday Drive, Suite 300
Reston, VA 20190
Phone: (703) 438-7508 Fax: (703) 438-3113

1. Complete the Travel Award Application available at www.toxpath.org/AM2008/Student_Travel_App08.pdf
2. Ask your faculty advisor or a faculty member who is familiar with your work to submit a letter of nomination summarizing your qualifications.
3. Submit your curriculum vitae.
4. Include a statement of career goals in toxicologic pathology.

Submit Abstracts by April 15, 2008, on-line at www.toxpath.org.

5. Submit an abstract on-line (should be limited to 250 words) describing your original work involving clinical or experimental research that relates to experimental or toxicologic pathology.

Young Investigator Award

Young Investigator Awards (1st, \$500; 2nd \$250; 3rd, \$100) are also presented at the STP meeting for the top three student poster abstracts. When you submit an abstract on-line, please check the appropriate box to indicate your interest in applying for the Young Investigator Award. Applicants will receive instructions about the selection process and poster judging times via e-mail in April.

It is important to make hotel reservations as soon as possible to ensure availability

MEETING DEADLINE TIMELINE

VISIT: WWW.TOXPATH.ORG

Abstract Submission Deadline: **APRIL 15, 2008**

Advance Registration Deadline: **APRIL 10, 2008**

Meeting Cancellation Deadline: **MAY 10, 2008**

Pre-Registration Deadline: **MAY 20, 2008**

Please make hotel reservations as soon as possible to ensure availability (pages 4–5).

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The Society of Toxicologic Pathology

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